

SAFETY DATA SHEET



Date of issue/Date of revision : 29 August 2024 Version : 2.01

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : SIGMACOVER 280 HARDENER

Product code : 00445190

Other means of identification

Not available.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Product use : Professional applications, Used by spraying.

Use of the substance/mixture : Coating.

Uses advised against : Product is not intended, labelled or packaged for consumer use.

1.3 Details of the supplier of the safety data sheet

PPG Coatings Belgium BV/SRL
Tweemontstraat 104
B-2100 Deurne
Belgium
Telephone +32-33606311
Fax +32-33606435

e-mail address of person responsible for this SDS : Product.Stewardship.EMEA@ppg.com

1.4 Emergency telephone number

Supplier

+31 20 4075210

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 2, H225
Skin Corr. 1C, H314
Eye Dam. 1, H318
Skin Sens. 1, H317
STOT SE 3, H335
STOT SE 3, H336
Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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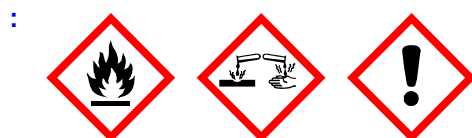
SECTION 2: Hazards identification

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



Signal word

: Danger

Hazard statements

: Highly flammable liquid and vapour.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Harmful to aquatic life with long lasting effects.

Precautionary statements

Prevention

: Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Response

: IF INHALED: Immediately call a POISON CENTER or doctor. IF SWALLOWED: Immediately call a POISON CENTER or doctor.

Storage

: Store in a well-ventilated place. Keep container tightly closed.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

P280, P210, P304 + P310, P301 + P310, P403 + P233, P501

Hazardous ingredients

: xylene
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine
2-methylpropan-1-ol
Epoxy Resin (700<MW<=1100)
2,4,6-tris(dimethylaminomethyl)phenol
3,6-diazaoctanethylenediamin

Supplemental label elements

: Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

: Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings

: Not applicable.

Tactile warning of danger

: Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB

: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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SECTION 2: Hazards identification

Other hazards which do not result in classification : Causes digestive tract burns. Prolonged or repeated contact may dry skin and cause irritation.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	% by weight	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Xylene	REACH #: 01-2119488216-32 EC: 215-535-7 CAS: 1330-20-7	≥10 - ≤25	Flam. Liq. 3, H226 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Dermal] = 1700 mg/kg ATE [Inhalation (vapours)] = 11 mg/l	[1] [2]
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	REACH #: 01-2119972320-44 EC: 500-191-5 CAS: 68082-29-1	≥10 - <25	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 2, H411	-	[1]
2-methylpropan-1-ol	REACH #: 01-2119484609-23 EC: 201-148-0 CAS: 78-83-1 Index: 603-108-00-1	≥10 - ≤25	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 STOT SE 3, H336	-	[1] [2]
Epoxy Resin (700<MW ≤1100)	CAS: 25036-25-3	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317	-	[1]
2,4,6-tris (dimethylaminomethyl) phenol	REACH #: 01-2119560597-27 EC: 202-013-9 CAS: 90-72-2	≥1.0 - ≤5.0	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1C, H314 Eye Dam. 1, H318	ATE [Oral] = 1200 mg/kg ATE [Dermal] = 1280 mg/kg	[1]
ethylbenzene	REACH #: 01-2119489370-35 EC: 202-849-4 CAS: 100-41-4 Index: 601-023-00-4	≥1.0 - ≤5.0	Flam. Liq. 2, H225 Acute Tox. 4, H332 STOT RE 2, H373 (hearing organs) Asp. Tox. 1, H304 Aquatic Chronic 3, H412	ATE [Inhalation (vapours)] = 17.8 mg/l	[1] [2]
3,6-diazaoctanethylenediamin	EC: 203-950-6 CAS: 112-24-3 Index: 612-059-00-5	≥1.0 - <5.0	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 3, H412	ATE [Oral] = 1716 mg/kg ATE [Dermal] = 1465 mg/kg	[1] [2]
toluene	REACH #: 01-2119471310-51 EC: 203-625-9	≤0.30	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d	-	[1] [2]

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SECTION 3: Composition/information on ingredients

	CAS: 108-88-3 Index: 601-021-00-3		STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 See Section 16 for the full text of the H statements declared above.		
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SUB codes represent substances without registered CAS Numbers.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek immediate medical attention.
- Inhalation** : Remove to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.
- Skin contact** : Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- Ingestion** : If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do NOT induce vomiting.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes severe burns. Defatting to the skin. May cause an allergic skin reaction.
- Ingestion** : Corrosive to the digestive tract. Causes burns. Can cause central nervous system (CNS) depression.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

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SECTION 4: First aid measures

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon oxides
nitrogen oxides

5.3 Advice for firefighters

- Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

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SECTION 7: Handling and storage

Advice on general occupational hygiene

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

: Store between the following temperatures: 0 to 35°C (32 to 95°F). Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidising materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

See Section 1.2 for Identified uses.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
xylene	EU OEL (Europe, 1/2022). [xylene, mixed isomers] Absorbed through skin. STEL: 442 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 221 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
2-methylpropan-1-ol	ACGIH TLV (United States, 7/2023). TWA: 152 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.
ethylbenzene	EU OEL (Europe, 1/2022). Absorbed through skin. STEL: 884 mg/m ³ 15 minutes. STEL: 200 ppm 15 minutes. TWA: 442 mg/m ³ 8 hours. TWA: 100 ppm 8 hours.
3,6-diazaoctanethylenediamin	IPEL (-). Absorbed through skin. TWA: 1 ppm
toluene	EU OEL (Europe, 1/2022). Absorbed through skin. STEL: 384 mg/m ³ 15 minutes. STEL: 100 ppm 15 minutes. TWA: 192 mg/m ³ 8 hours. TWA: 50 ppm 8 hours.

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SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs

Product/ingredient name	Type	Exposure	Value	Population	Effects	
xylene	DNEL	Long term Oral	5 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Local	
	DNEL	Long term Inhalation	65.3 mg/m ³	General population	Systemic	
	DNEL	Long term Dermal	125 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	212 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Local	
	DNEL	Long term Inhalation	221 mg/m ³	Workers	Systemic	
	DNEL	Short term Inhalation	260 mg/m ³	General population	Local	
	DNEL	Short term Inhalation	260 mg/m ³	General population	Systemic	
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Local	
	DNEL	Short term Inhalation	442 mg/m ³	Workers	Systemic	
	DNEL	Long term Oral	97.2 µg/kg bw/day	General population	Systemic	
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	DNEL	Long term Dermal	97.2 µg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	0.169 mg/m ³	General population	Systemic	
	DNEL	Long term Dermal	0.272 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	0.952 mg/m ³	Workers	Systemic	
	2-methylpropan-1-ol	DNEL	Long term Inhalation	55 mg/m ³	General population	Local
		DNEL	Long term Inhalation	310 mg/m ³	Workers	Local
2,4,6-tris(dimethylaminomethyl)phenol	DNEL	Long term Oral	0.075 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Dermal	0.075 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.075 mg/kg bw/day	General population	Systemic	
	DNEL	Short term Inhalation	0.13 mg/m ³	General population	Systemic	
	DNEL	Long term Inhalation	0.13 mg/m ³	General population	Systemic	
	DNEL	Long term Dermal	0.15 mg/kg bw/day	Workers	Systemic	
	DNEL	Long term Inhalation	0.53 mg/m ³	Workers	Systemic	
	DNEL	Short term Dermal	0.6 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Inhalation	2.1 mg/m ³	Workers	Systemic	
	ethylbenzene	DMEL	Long term Inhalation	442 mg/m ³	Workers	Local
		DMEL	Short term Inhalation	884 mg/m ³	Workers	Systemic
		DNEL	Long term Oral	1.6 mg/kg bw/day	General population	Systemic
DNEL		Long term Inhalation	15 mg/m ³	General population	Systemic	
DNEL		Long term Inhalation	77 mg/m ³	Workers	Systemic	
DNEL		Long term Dermal	180 mg/kg bw/day	Workers	Systemic	
DNEL		Short term Inhalation	293 mg/m ³	Workers	Local	
DNEL		Long term Dermal	28 µg/cm ²	Workers	Local	
3,6-diazaoctanethylenediamin	DNEL	Long term Dermal	0.25 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Inhalation	0.29 mg/m ³	General population	Systemic	
	DNEL	Long term Oral	0.41 mg/kg bw/day	General population	Systemic	
	DNEL	Long term Dermal	0.43 mg/cm ²	General population	Local	
	DNEL	Long term Dermal	0.57 mg/kg bw/day	Workers	Systemic	
	DNEL	Short term Dermal	1 mg/cm ²	General population	Local	

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SECTION 8: Exposure controls/personal protection

toluene	DNEL	Long term Inhalation	1 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	8 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	20 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	1600 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	5380 mg/m ³	Workers	Systemic
	DNEL	Long term Oral	8.13 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	56.5 mg/m ³	General population	Local
	DNEL	Long term Inhalation	56.5 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	192 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	192 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	226 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	226 mg/m ³	General population	Local
	DNEL	Short term Inhalation	226 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	384 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	384 mg/m ³	Workers	Local
DNEL	Short term Inhalation	384 mg/m ³	Workers	Systemic	

PNECs

Product/ingredient name	Type	Compartment Detail	Value	Method Detail	
xylene	-	Fresh water	0.327 mg/l	-	
	-	Marine water	0.327 mg/l	-	
	-	Sewage Treatment Plant	6.58 mg/l	-	
	-	Fresh water sediment	12.46 mg/kg dwt	-	
	-	Marine water sediment	12.46 mg/kg dwt	-	
	-	Soil	2.31 mg/kg	-	
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	-	Fresh water	0.043 mg/l	Assessment Factors	
	-	Marine water	0 mg/l	Assessment Factors	
	-	Sewage Treatment Plant	3.84 mg/l	Assessment Factors	
	-	Fresh water sediment	434.02 mg/kg dwt	Equilibrium Partitioning	
	-	Marine water sediment	43.4 mg/kg dwt	Equilibrium Partitioning	
	-	Soil	86.78 mg/kg dwt	Equilibrium Partitioning	
	2-methylpropan-1-ol	-	Fresh water	0.4 mg/l	Assessment Factors
		-	Marine water	0.04 mg/l	Assessment Factors
		-	Sewage Treatment Plant	10 mg/l	Assessment Factors
		-	Fresh water sediment	1.56 mg/kg dwt	Equilibrium Partitioning
-		Marine water sediment	0.156 mg/kg dwt	-	
-		Soil	0.076 mg/kg dwt	Equilibrium Partitioning	
ethylbenzene	-	Fresh water	0.1 mg/l	Assessment Factors	
	-	Marine water	0.01 mg/l	Assessment Factors	
	-	Sewage Treatment Plant	9.6 mg/l	Assessment Factors	
	-	Fresh water sediment	13.7 mg/kg dwt	Equilibrium Partitioning	
	-	Marine water sediment	1.37 mg/kg dwt	Equilibrium Partitioning	
	-	Soil	2.68 mg/kg dwt	Equilibrium Partitioning	
	-	Secondary Poisoning	20 mg/kg	-	
	-	Fresh water	0.68 mg/l	Sensitivity Distribution	
toluene	-	Marine water	0.68 mg/l	Sensitivity Distribution	
	-	Sewage Treatment Plant	13.61 mg/l	Sensitivity Distribution	
	-	Fresh water sediment	16.39 mg/kg dwt	Equilibrium Partitioning	
	-	Marine water sediment	16.39 mg/kg dwt	-	

8.2 Exposure controls

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SECTION 8: Exposure controls/personal protection

- Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.
- Individual protection measures**
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Chemical splash goggles and face shield. Use eye protection according to EN 166.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. When prolonged or frequently repeated contact may occur, a glove with a protection class of 6 (breakthrough time greater than 480 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 2 or higher (breakthrough time greater than 30 minutes according to EN 374) is recommended. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.
- Gloves** : nitrile neoprene
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. If workers are exposed to concentrations above the exposure limit, they must use appropriate, certified respirators. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Wear a respirator conforming to EN140. Filter type: organic vapour (Type A) and particulate filter P3
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Liquid.
- Colour** : Clear.
- Odour** : Characteristic.
- Odour threshold** : Not available.
- Melting point/freezing point** : May start to solidify at the following temperature: 12°C (53.6°F) This is based on data for the following ingredient: 3,6-diazaoctanethylenediamin. Weighted average: -80.29°C (-112.5°F)
- Initial boiling point and boiling range** : >37.78°C
- Flammability** : Not available.
- Upper/lower flammability or explosive limits** : Greatest known range: Lower: 1.7% Upper: 10.9% (2-methylpropan-1-ol)
- Flash point** : Closed cup: 22°C
- Auto-ignition temperature** :

Ingredient name	°C	°F	Method
3,6-diazaoctanethylenediamin	337.78	640	

- Decomposition temperature** : Stable under recommended storage and handling conditions (see Section 7).
- pH** : Not applicable. insoluble in water.
- Viscosity** : Kinematic (40°C): >21 mm²/s
- Solubility(ies)** :

Media	Result
cold water	Not soluble

- Partition coefficient: n-octanol/ water** : Not applicable.

- Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
2-methylpropan-1-ol	<12.00102	<1.6	DIN EN 13016-2			

- Evaporation rate** : Highest known value: 0.84 (ethylbenzene) Weighted average: 0.72 compared with butyl acetate
- Relative density** : 0.92
- Bulk density (g/cm³)** : 0.923
- Vapour density** : Highest known value: 5.04 (Air = 1) (3,6-diazaoctanethylenediamin). Weighted average: 3.29 (Air = 1)
- Explosive properties** : The product itself is not explosive, but the formation of an explosible mixture of vapour or dust with air is possible.
- Oxidising properties** : Product does not present an oxidizing hazard.

Particle characteristics

- Median particle size** : Not applicable.

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SECTION 9: Physical and chemical properties

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : When exposed to high temperatures may produce hazardous decomposition products. Refer to protective measures listed in sections 7 and 8.

10.5 Incompatible materials : Keep away from the following materials to prevent strong exothermic reactions: oxidising agents, strong alkalis, strong acids.

10.6 Hazardous decomposition products : Depending on conditions, decomposition products may include the following materials: carbon oxides nitrogen oxides

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
xylene	LD50 Dermal	Rabbit	1.7 g/kg	-
	LD50 Oral	Rat	4.3 g/kg	-
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
2-methylpropan-1-ol	LC50 Inhalation Vapour	Rat	24.6 mg/l	4 hours
	LD50 Dermal	Rabbit	2460 mg/kg	-
	LD50 Oral	Rat	2830 mg/kg	-
Epoxy Resin (700<MW<=1100)	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
2,4,6-tris(dimethylaminomethyl)phenol	LD50 Dermal	Rat	1280 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
ethylbenzene	LC50 Inhalation Vapour	Rat	17.8 mg/l	4 hours
	LD50 Dermal	Rabbit	17.8 g/kg	-
3,6-diazaoctanethylenediamin	LD50 Oral	Rat	3.5 g/kg	-
	LD50 Dermal	Rabbit	1465 mg/kg	-
toluene	LD50 Oral	Rat	1716 mg/kg	-
	LC50 Inhalation Vapour	Rat	49 g/m ³	4 hours
	LD50 Dermal	Rabbit	8.39 g/kg	-
	LD50 Oral	Rat	5580 mg/kg	-

Conclusion/Summary : There are no data available on the mixture itself.

Acute toxicity estimates

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SECTION 11: Toxicological information

Route	ATE value
Oral	18922.85 mg/kg
Dermal	5060.89 mg/kg
Inhalation (vapours)	40.36 mg/l

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
xylene Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Irritant	Human	-	-	-

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Eyes : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine 3,6-diazaoctanethylenediamin	skin	Mouse	Sensitising
	skin	Guinea pig	Sensitising

Conclusion/Summary

Skin : There are no data available on the mixture itself.

Respiratory : There are no data available on the mixture itself.

Mutagenicity

Conclusion/Summary : There are no data available on the mixture itself.

Carcinogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Reproductive toxicity

Conclusion/Summary : There are no data available on the mixture itself.

Teratogenicity

Conclusion/Summary : There are no data available on the mixture itself.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
xylene	Category 3	-	Respiratory tract irritation
2-methylpropan-1-ol	Category 3	-	Respiratory tract irritation
toluene	Category 3	-	Narcotic effects
	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
ethylbenzene	Category 2	-	hearing organs
toluene	Category 2	-	-

Aspiration hazard

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SECTION 11: Toxicological information

Product/ingredient name	Result
xylene	ASPIRATION HAZARD - Category 1
ethylbenzene	ASPIRATION HAZARD - Category 1
toluene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure : Not available.

Potential acute health effects

- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Ingestion** : Corrosive to the digestive tract. Causes burns. Can cause central nervous system (CNS) depression.
- Skin contact** : Causes severe burns. Defatting to the skin. May cause an allergic skin reaction.
- Eye contact** : Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
- Ingestion** : Adverse symptoms may include the following:
stomach pains
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
dryness
cracking
blistering may occur
- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary : Not available.

General : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

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SECTION 11: Toxicological information

- Carcinogenicity** : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : No known significant effects or critical hazards.
Other information : Not available.

Causes digestive tract burns. Prolonged or repeated contact may dry skin and cause irritation. Repeated exposure to high vapor concentrations may cause irritation of the respiratory system and permanent brain and nervous system damage. Inhalation of vapour/aerosol concentrations above the recommended exposure limits causes headaches, drowsiness and nausea and may lead to unconsciousness or death. Avoid contact with skin and clothing. Exposure to amine vapor has been reported to cause transient corneal edema described as blue haze, halo effect, foggy or blurred vision for several hours. This condition is typically temporary and does not cause permanent visual effects. When the proper eye protection specified in Section 8 is worn, exposure is significantly reduced and the condition has not been observed.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	EC10 1.78 mg/l	Algae	72 hours
2-methylpropan-1-ol	Acute EC50 1100 mg/l	Daphnia	48 hours
2,4,6-tris(dimethylaminomethyl)phenol	Acute LC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >100 mg/l	Fish	96 hours
ethylbenzene	Acute EC50 1.8 mg/l Fresh water	Daphnia	48 hours
	Chronic NOEC 1 mg/l Fresh water	Daphnia - <i>Ceriodaphnia dubia</i>	-

Conclusion/Summary : There are no data available on the mixture itself.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
2,4,6-tris(dimethylaminomethyl)phenol	OECD 301D Ready Biodegradability - Closed Bottle Test	4 % - Not readily - 28 days	-	-
ethylbenzene	-	79 % - Readily - 10 days	-	-

Conclusion/Summary : There are no data available on the mixture itself.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
xylene	-	-	Readily
Fatty acids, C18-unsatd., dimers, oligomeric reaction products with tall-oil fatty acids and triethylenetetramine	-	-	Not readily
2,4,6-tris(dimethylaminomethyl)phenol	-	-	Not readily
ethylbenzene	-	-	Readily
toluene	-	-	Readily

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SECTION 12: Ecological information

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
xylene	3.12	7.4 to 18.5	Low
2-methylpropan-1-ol	1	-	Low
2,4,6-tris(dimethylaminomethyl)phenol	0.219	-	Low
ethylbenzene	3.6	79.43	Low
3,6-diazaoctanethylenediamin	-1.66 to -1.4	-	Low
toluene	2.73	8.32	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste

European waste catalogue (EWC)

Waste code	Waste designation
08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)
Container	15 01 06 mixed packaging

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SECTION 13: Disposal considerations

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN3469	UN3469	UN3469	UN3469
14.2 UN proper shipping name	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE	PAINT, FLAMMABLE, CORROSIVE
14.3 Transport hazard class(es)	3 (8)	3 (8)	3 (8)	3 (8)
14.4 Packing group	II	II	II	II
14.5 Environmental hazards	No.	Yes.	No.	No.
Marine pollutant substances	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Additional information

ADR/RID : None identified.
Tunnel code : (D/E)
ADN : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.
IMDG : None identified.
IATA : None identified.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not applicable.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

[EU Regulation \(EC\) No. 1907/2006 \(REACH\)](#)

[Annex XIV - List of substances subject to authorisation](#)

[Annex XIV](#)

None of the components are listed.

[Substances of very high concern](#)

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SECTION 15: Regulatory information

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

P5c

15.2 Chemical safety assessment : No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

✔ Indicates information that has changed from previously issued version.

Abbreviations and acronyms

ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

PBT = Persistent, Bioaccumulative and Toxic

vPvB = Very Persistent and Very Bioaccumulative

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated

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SECTION 16: Other information

H411 H412	exposure. Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.
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Full text of classifications [CLP/GHS]

Acute Tox. 4 Aquatic Chronic 2 Aquatic Chronic 3 Asp. Tox. 1 Eye Dam. 1 Eye Irrit. 2 Flam. Liq. 2 Flam. Liq. 3 Repr. 2 Skin Corr. 1B Skin Corr. 1C Skin Irrit. 2 Skin Sens. 1 Skin Sens. 1A STOT RE 2 STOT SE 3	ACUTE TOXICITY - Category 4 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 ASPIRATION HAZARD - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 FLAMMABLE LIQUIDS - Category 2 FLAMMABLE LIQUIDS - Category 3 REPRODUCTIVE TOXICITY - Category 2 SKIN CORROSION/IRRITATION - Category 1B SKIN CORROSION/IRRITATION - Category 1C SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITISATION - Category 1 SKIN SENSITISATION - Category 1A SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
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